DOCUMENT RESUME

ED 311 384 CG 021 999

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TITLE The Relationship of Sexual Responsibility to Knowledge of Acquired Immuno-Deficiency Syndrome among High School Students.
PUB DATE 88
NOTE 43p.
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Acquired Immune Deficiency Syndrome; High Schools; *High School Students; *Knowledge Level; *Responsibility; Sex Differences; *Sexuality

ABSTRACT

Because there is no cure or vaccine for Acquired Immune Deficiency Syndrome (AIDS), many authorities have recommended education as the primary means for controlling the spread of the disease. However, knowledge about AIDS represents a necessary, but not sufficient, condition for reduction of risky behavior. Although hetereosexual high school and college students have a low incidence of AIDS at the present time, the potential for AIDS to spread in the adolescent population is present. This study examined the relationship of sexual responsibility to AIDS knowledge in male (N=41) and female (N=45) high school students. Subjects' knowledge about AIDS and sexual responsibility was assessed through self-report questionnaires. The results indicated that sexual responsibility correlated with AIDS knowledge. Females were more sexually responsible than males. There were important gaps and misconceptions in students knowledge about AIDS; students knew more about transmission and risk groups than they did about basic medical facts. The results revealed a clear need to continue to focus education for today's adolescents on behavioral, emotional, and personality changes needed to foster responsible sexual behavior. (Author/ABL)

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ED311384

The Relationship of Sexual Responsibility to Knowledge of Acquired Immuno-Deficiency Syndrome among High School Students

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The Relationship of Sexual Responsibility to Knowledge of Acquired Immuno-Deficiency Syndrome among High School Students

Abstract

This study examines the relationship of sexual responsibility to AIDS knowledge in an adolescent population. Male (41) and Female (45) students in a mid-western urban high school completed the Andre/Moses Sexual Responsibility Scale and an AIDS Knowledge questionnaire. Students reported sexual responsibility correlated with AIDS knowledge. Females were more sexually responsible than males. Subjects did have some basic knowledge of AIDS, but there were important gaps and misconceptions in this knowledge. Overall students knew more about HIV transmission and risk groups than they did about basic medical facts. The data reveal a clear need to continue to focus education for today's adolescents on behavioral, emotional, and personality changes needed to foster responsible sexual behavior.

The Relationship of Sexual Responsibility to Knowledge of Acquired Immuno-Deficiency Syndrome among High School Students

Acquired immune deficiency syndrome (AIDS), produced by the human immuno-deficiency virus (HIV), is a fatal sexually transmitted disease (STD) that has reached epidemic proportions in segments of society; there is serious concern that the disease will spread more widely. Because there is no cure or vaccine for AIDS, many authorities have recommended education as the primary means for controlling the spread of the disease (American College Health Assocation, 1985; Barnes, 1987; Bowen, 1987; Lenaghan and Lenaghan, 1987; Norman, 1986; Weisburd, 1987). The goals of recommended educational programs are to increase awareness of AIDS transmission vectors and to reduce the incidence of behaviors that are likely to spread the disease. Knowledge of AIDS represents a necessary, but not sufficient, condition for reduction of risky behavior. Certainly individuals knowledgable about AIDS may engage in risky behavior; but individuals unknowledgable about AIDS have no basis for determining risk. The development of effective educational programs requires the assessment of the knowledge level of possible participants. One purpose of the present study was to examine knowledge of AIDS in a sample of high school students. Although heterosexual high school and college students have a low incidence of AIDS at the present time, adolescents and young adults do engage in sexual behaviors that

would be regarded as high risk if the proportion of HIV infected individuals present in that population were higher. Adolescents and young adults are likely to have multiple partners over a period of years and to engage in sexual intercourse without using condoms (Baldwin and Baldwin, 1988; Shah and Zelnik, 1981; Sprinthall and Collins, 1988; Thornburg, 1982). Other STDs are epidemic in the older adolescent/young adult population (Sprinthall and Collins, 1988; Thornburg, 1982) . Thus, the potential for AIDS to spread in the adolescent population is present.

Few attempts have been made to assess knowledge of AIDS in an adolescent population. Price, Desmond, and Kukulka (1985) examined the sources and level of information on AIDS in a sample of 250 secondary public school students from midwestern high schools. Students completed a 19 item AIDS knowledge test and reported their sources of knowledge. Television was the most frequently reported source of AIDS knowledge. Fewer than one-third of the adolescents reported receiving information on AIDS from their schools or physicians. Those reporting information from magazines had the highest assessed knowledge of AIDS. Price, et. al. (1985) reported, however, that the students in general did not possess a high level of AIDS knowledge. Those students with the highest level of knowledge only answered 47% of the questions correctly. Students who reported having a combination of sources demonstrated more knowledge of AIDS than did students with a single source.

McDermott, Hawkins, Moore, and Cittadino (1987) examined AIDS awareness and information sources in a sample of midwestern college students. Students completed a 15 item true-false knowledge test dealing with general facts about and transmission of AIDS. Across the items, performance ranged from 63 to 95 percent correct. Substantial percentages of the college students indicated that indiscriminate sexual behavior did not increase of AIDS (32%) and that casual sex did not increase the risk of AIDS (20%). Television and newspapers were the most commonly reported sources of information. Similar levels of knowledge were reported by Stevenson and DeBord (1988).

Baldwin and Baldwin (1988) assessed knowledge of AIDS in a sample of sexually active western college students by using a 19 item test designed to measure "modes by which the disease can be transmitted" (p 187). The specific items on the test were not reported. Performance averaged 15 correct with a range from 4-19. Knowledge did not predict use of low risk sexual behaviors.

These results suggest that many basic facts about AIDS are widely known among the late adolescent/young adult population. However, substantial minorities lack basic facts about the transmission of AIDS and risky sexual activities. This level of knowledge about AIDS is similar to adolescents' and young adults' knowledge of other sexually transmitted diseases (Benell, 1073; Hayes & Littlefield, 1976). In addition, the knowledge tests used in these studies have

been quite short. In the present study, a more comprehensive test of AIDS knowledge was developed in order to examine subareas of AIDS knowledge among adolescents.

Adolescents' and young adults' attitudes towards sexuality have been found to be related to their sexual and contraceptive behavior and knowledge. Specifically, Byrne, Fisher, and their colleagues and Gerrard, as well as other researchers, have demonstrated that individuals with a generally negative attitude to sexuality or a high level of sex guilt have lower levels of sexual activity, less knowledge of sexuality or contraception, and are more likely to engage in behaviors that risk pregnancy if they do become coitally active (Byrne, 1983; Fisher, W. A. Byrne, & White, 1983; Fisher, Byrne, White, and Kelley, 1988; Gerrard, 1977; 1982; 1987; Mosher & Cross, 1971; Yarber and Fisher, 1983; Yarber and McCabe, 1984). Andre (1988) and Andre and Moses (1986) have developed an instrument designed to assess sexual responsibility and have reported that this measure predicted effective contraceptive behavior better than the Sexual Opinion Survey that had been used by Byrne and Fisher. Andre (1988) reported also that individuals high in sexual responsibility scored higher on a test of contraceptive knowledge than did individuals low in sexual responsibility. Given that sexual responsibility predicts knowledge and risk taking with respect to contraception, it seems likely that sexual responsibility will also relate to knowledge of AIDS. This hypothesis was investigated in the

present study by administering a sexual responsibility instrument along with the AIDS knowledge test.

In summary, the present study had two major purposes. One purpose was to explore high school students' knowledge of AIDS more completely than had been done previously. The second purpose was to test the hypothesis that sexual responsibility, as measured by the sexual responsibility scale developed by Andre and Moses (1986), would predict knowledge of AIDS in a sample of high school students.

Method

Subjects

Eighty-eight male and female students enrolled in high school in a small midwestern city (pop. 26,000) served as subjects in this study. In order to analyze the data by class year, the data from the only two freshman students who participated were eliminated from the analysis. The final sample consisted of 34 sophomores (Males = 15, Females = 19), 24 juniors (Males = 8, Females = 16), and 28 seniors (Males = 18, Females = 10). The subjects were volunteers who responded to a request to participate in a study of knowledge of AIDS.

Materials

The survey materials consisted of: 1) a page of general directions to the subjects; 2) a 9-item demographic section requesting information about the student's sex, class year, marital

status, religiousity, political preference, and ethnic origin; 3) the Andre/Moses Sexual Responsibility Survey (1986); and 4) an experimenter designed AIDS knowledge test.

Sexual Responsibility Scale. The Sexual Responsibility Scale contained 25 statements rated on a 7 point Likert scale. Each statement depicted a responsible or irresponsible sexual behavior or attitude and respondents rated how much they agreed or disagreed with each item. Because of the scoring procedures, low scores on this scale represent more sexually responsible behavior. The complete scale, scoring procedures and psychometric information are given in Andre and Moses (1986).

AIDS Knowledge Test. The AIDS Knowledge section of the questionnaire was separated into 3 sections. Part I contained 56 statements examining the subject's general knowledge of AIDS. The respondents rated their belief in the truth or falsity of each statement on a 0-99 point scale. The endpoints were anchored as follows: 0) I absolutely and completely believe this statement to be false; and 99) I absolutely and completely believe this statement to be true. Part II examined the subject's knowledge of safe sexual activities as related to AIDS. Part III surveyed the subject's knowledge of the body products in which the AIDS virus has been isolated. There was a fourth part of the test; however, because of problems in meaningfully scoring this last part, data from this last part are not reported in the present study. The test was developed by

the first author and a team of research assistants and was based on current articles in the area of AIDS and current public health pamphlets and recommendations. Items were written in the following areas: 1) groups at risk of AIDS, 2) causes and symptoms of AIDS, 3) transmission of AIDS virus, 4) safe sexual practices. The items are presented in Table 2.

Scoring

Part I of the knowledge test was scored in two ways. A Part I Rating score was computed by reversing the respondent's response on items that were false and then taking the mean of the ratings across the 56 items on Part I. This measure reflects the degree of confidence the respondents had in correct true and false answers. The assumption behind this measure is that a person who rates a true item 99 or a false item 0 has greater knowledge than a person who rates a true item some number less than 99 or a false item some number greater than 0. A Part I Correctness Score was computed by recoding responses as 1 (true) if their rating was greater than 50 or 0 (false) if the rating were less than 51. Then each item was scored as correct or incorrect according the test key and the total number of items correct determined. Both scores were included in the analyses reported below.

Procedure

The survey was administered to the students in a large auditorium with adequate seating space left between the subjects to

insure privacy during the completion of the surveys. The survey booklet was distributed. The experimenter read general directions, then the respondents completed the survey at their own pace. The survey was administered during a morning study hall period. The survey booklet took approximately 40 minutes to complete.

Results

Table 1 presents a demographic analysis of the sample. The sample was predominantly Protestant or Catholic. Most of the sample attended church several times a month; however, the average self-rated strength of religious conviction was only at the mean of the 7 point scale for females and below the mean for males. More males than females rated themselves as atheist or agnostic. Slightly more than a third each of the respondents labeled themselves Republicans or Independents in terms of political affiliation.

Insert Table 1 about here

AIDS Knowledge

Table 2 presents the percentage of males and females correct on each of the knowledge test items. In addition, the items for Part 1 and Part 2 are classified into three categories: 1) information about transmission of HIV, 2) risk groups, and 3) medical facts about AIDS. These categories were used in a supplementary analysis reported below.

Insert Table 2 about here

Internal Consistency The internal consistency of the parts of the knowledge scale were calculated by Cronbach's alpha as follows. Part I Correctness score = .7501, Part II Correctness Score = 0.5470, Part III Correctness score = 0.5958, Mean Part I Rating Score = 0.8152. Although the reliabilites of Parts II-III were somewhat weak, probably because the scales were short, they were deemed sufficient for use in the analysis.

Analysis of Variance. Each of the part scores on the knowledge test were subjected to a 2 (Sex) X 3 (Class Year) ANOVA. There were no significant differences between the sexes or class years in knowledge of AIDS.

As noted above, to further examine the nature of respondents' knowledge, the items in Part 1 and Part 2 of the Aids Knowledge test were classified into three categories: 1) items dealing with transmission of HIV, 2) items dealing with risk groups, and 3) general medical facts about AIDS. The items from Part 3 were not included because they did not fit into this classification scheme. A percent correct score for each category was computed for each subject. The percent correct scores were subjected to a mixed between-within (split-plot) 2 X 3 ANOVA with Sex as the between subject factor and Category of item as the within subject factor.

This analysis revealed a significant effect for Item Type, $F(2,168)=14.70$, $p<.0001$, $MS_e=0.01005$. No other effects were significant. The means are presented in Table 3. Both male and female students performed worse on the medical fact items than on the transmission or risk group items.

Insert Table 3 about here

Sexual Responsibility

An analysis of variance on the Sexual Responsibility Scale found a significant difference ($F(1)=30.97$, $p< 0.0001$) between females and males. Females were found to be more responsible in their sexual attitudes ($M_{female}=2.52075$, $n=45$) than males, ($M_{male}=2.95506$, $n=41$). A significant interaction ($F(2)=3.73$, $p<0.0282$) was found between sex and class year. Junior class males were lower in sexual responsibility than the sophomore or senior males; level of sexual responsibility did not differ across class years for females. The means are presented in Table 4.

Insert Table 4 about here

Relationship of AIDS Knowledge to Sexual Responsibility

Table 5 contains the correlations between the Sexual

Responsibility measure and the AIDS knowledge test scores. As expected, sexual responsibility correlated significantly with two of the AIDS knowledge test scores: the Part I Rating Score and the Part II correctness score. While the correlations were low, they were in the predicted direction. Individuals higher in sexual responsibility had more knowledge of AIDS.

Insert Table 5 about here

To assess the relative influence of sexual responsibility on AIDS knowledge, a regression analysis was performed on the knowledge test part scores. The predictor variables included sex, responsibility score, depth of religious conviction, and frequency of church attendance. Only sexual responsibility contributed significantly to regression for the Part II score and the Part I Rating Score. Table 6 presents the regression coefficients and significance levels for these two variables. These analyses suggest that the relationship between sexual responsibility and AIDS knowledge is not produced by the differences between the sexes in sexual responsibility.

Insert Table 6 about here

Discussion

One purpose of the present study was to examine the relationship

between sexual responsibility and knowledge of AIDS. Previous research has demonstrated that general attitude to sexuality as measured either by Mosher's Sex Guilt Scale or the White, et al erotophilia/phobia scale predicts contraceptive knowledge and risk taking with respect to contraception. Andre and Moses (1986) and Andre (1988) had developed a sexual responsibility scale designed to assess the degree to which respondents' held responsible sexual attitudes. Among college students, this instrument was shown to predict contraceptive knowledge and behavior more effectively than the White et al erotophilia/phobia measure. On the basis of this research, we predicted that sexual responsibility would similarly be related to knowledge of AIDS. For the high school students in the present sample, this prediction was confirmed. Interestingly, the correlation between sexual responsibility and Part I of the AIDS knowledge test was significant when the Part I Rating score was used, but not when the Part I Correctness score was used. The reliability of the rating score was higher than that of the correctness score as well. These results suggest that the Rating Score provides a more sensitive and accurate measure for assessment of AIDS knowledge.

Why should students lower in sexual responsibility have less knowledge of AIDS? With respect to contraception, Fisher, Byrne, White (1983) have argued that "erotophobia or high sex guilt may interfere with the learning of sexual and contraceptive information". Fisher, Byrne, White, and Kelley (1988) have suggested that

erotophobes have difficulty "attending to, processing, and retrieving sexual or contraceptive information" (p 139). The implication of their approach is that, for erotophobes, negative affect generated by sexual stimuli interferes directly with cognitive processes and learning. Recent data collected by Gerrard (1988, personal communication) suggest a simpler interpretation. Gerrard has suggested that erotophobes and erotophiles are equally capable of learning sexually related information if the instruction forces them to do so. Given a choice, however, erotophobes will elect to expend less effort in learning sexually oriented material. Thus, the difference in sexual knowledge between erotophobes and erotophiles seems to be primarily a matter of motivation to learn. Because sexual responsibility predicts contraceptive knowledge better than erotophilia/phobia, we would expect that individuals low in sexual responsibility would be unmotivated to learn AIDS oriented material. Similarly, even if they had knowledge of AIDS facts, sexually active individuals low in sexual responsibility are more likely to take sexually related risks than are individuals high in sexual responsibility (Andre, 1988; Andre and Moses, 1986). This fact has implications for educational programs designed to communicate AIDS information to high school students. Particularly for individuals low in sexual responsibility, a program cannot assume that exposure to information will lead to reductions in risk taking behavior with respect to AIDS. Individuals low in sexual responsibility may avoid

learning relevant information, if the instructional procedures allow them to do so. In addition to more traditional didactic instruction, school-based educational programs designed to facilitate behavioral compliance with safer sexual behavior guidelines should include activities such as role plays and simulations which are more likely to influence attitudes and behavior. Because adolescents receive much of the sex education from peers, media, and reading (Andre, Frevert, & Schuchmann, 1988), educational approaches using peer tutoring, media, and print materials that adolescents are likely to read should be employed in addition to teacher-led classes.

A second purpose of this study was to examine adolescents' knowledge of facts about AIDS. Performance on the knowledge test indicated that a majority of adolescents were familiar with basic facts about AIDS. Overall, students averaged about 70% correct. Performance was better on items dealing with transmission of HIV and risk groups than on items dealing with basic medical facts about AIDS. Of course, the items in the three categories do not represent random samplings from the population of possible items in each of the three domains. Thus, it is possible that the difference between the medical fact domain and the other two domains can be accounted for by selection differences in item difficulty. We may have selected difficult items for the medical fact category and easy items for the other two categories. This item selection bias seems unlikely for two reasons. One, examination of the items (see Table 2) suggests

that the medical fact items are not more complex in form or structure than the transmission items. Two, information about transmission and risk groups has received much more play in the media than information about medical facts about AIDS. Thus, students would have had a greater opportunity to learn information about transmission and risk groups. These considerations suggests that the observed knowledge difference truly reflects a different level of knowledge between the domains in the population sampled. It is somewhat heartening to know that adolescents have an better understanding of HIV transmission and risk groups than they do of medical facts about AIDS. It is the former categories of information that are important to slow the spread of AIDS.

The specific information known to adolescents was consistent with this hope. Ninety to one hundred percent knew that vaginal or anal intercourse without a condom and sharing intravenous needles risked transmission of HIV, that students were extremely unlikely to become infected with HIV from casual contact at school or from contact with shared equipment. Over ninety percent recognized that a person may transmit HIV even if there were no observable symptoms of AIDS, that male and female prostitutes and those who employ their services were at increased risk of HIV infection, that homosexuals and bisexuals were not the only persons who could contract AIDS, that having sex with multiple partners increased the risk of AIDS, and that thinking about sex, massage and hugging were not likely to transmit AIDS.

However, substantial proportions of students did lack some basic information. Only half or less of the students were correct on the items relating to wet kissing, fellatio, and cunnilingus. While it is not clear that salival transmission or oral sex are likely vectors, current public health recommendations do regard these as potentially risky activities. Almost half of the sample classified intercourse with a condom as completely safe (Males - 48%, Females - 39%). Only about 50% of the students knew that Kaposi's Sarcoma is a normally rare tumor; but frequently is seen as a disease contracted by AIDS patients. Only about 30% knew that an AIDS virus and not a bacterium infects the immune system. About 55% failed to recognize that shared toothbrushes could lead to transmission of the virus. Only 58% saw medical and health personnel as being at an increased risk for contracting AIDS; only 43% knew dentists were at an increased risk for contracting the virus. Taking a shower in gym class with an infected person was viewed by 28% as being a way to contract AIDS; around 20 percent believed that being sneezed on by an infected person or that being served by an infected waiter would transmit HIV. About 12 percent believed that a couple completely monogamous over their life span could contract AIDS if they engaged in oral or anal sex. Over half agreed that, at the present time, receiving blood during surgery would increase your risk of AIDS; approximately 79% of the sample agreed that one could indeed contract AIDS by donating blood to a blood bank! Only 48% knew that the AIDS

virus attackes the T-Cell. Further, only 52% correctly identified AIDS Related Complex (ARC) as a medical condition related to AIDS. Students occasionally expressed contradictions regarding AIDS transmission. For example, over 80% of the students correctly identified the following statement as false: "In purchasing condoms to reduce the risk of AIDS, one should avoid brands that contain spermicide in their lubrication." Paradoxically, only 23% correctly identified the following statement as true, "The use of spermicide during intercourse reduces the risk of transmitting the AIDS virus." These misconceptions and inaccuracies in knowledge in substantial proportions of the sample support the continuing social need for effective education about AIDS.

The fact that many adolescents do know the basic facts of HIV transmission suggests that educational efforts need to focus on changing adolescent behavior rather than knowledge. Baldwin and Baldwin (1988) reported that even college students who knew the need for condoms were not reliably using condoms in their sexual behavior. It is unlikely that younger adolescents would be more consistent in their use of condoms. Education needs to do more than transmit knowledge. Education for adolescents with respect to AIDS issues will continue to be a challenge to be addressed by all of society, but particularly by those most responsible for adolescents--their parents and schools. Parents and schools have a mandate to discuss openly, informatively, and honestly with adolescents the implications

and impacts of responsible sexual behavior and to develop programs designed to facilitate safer sexual practices. As AIDS continues to escalate in our nation, it becomes increasingly important to focus on the adolescent population if we are to halt the spread of this deadly disease.

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Table 1

Demographic Characteristics of Sample

	Males	Females
Sex	42	46
Religious Preference %		
Protestant	46	59
Catholic	27	33
Atheist/Agnostic	15	2
Other	10	7
Strength of Religious		
Conviction (mean)	3.21	4.04
Frequency of Church Attendance (%)		
once a week or more	30	46
2 or 3 times a month	13	14
once a month	7	8
a few times a year	22	14
once a year	4	8
less than once a year	4	12
never	4	5
Political Affiliation (%)		
republican	31	39
democrat	24	22
independent	41	26
other	5	13

Table 2

Percent Correct on Aids Knowledge Test for Males and Females

	Item	Item Type	Male	Female
	Part 1. True-False items (response scale: 0 completely false -- 99 completely true.)			
1.	Spouses of homosexuals and bisexuals are a group that has an increased risk of contracting AIDS.	RG	93	93
2.	Kaposi's Sarcoma is a normally rare tumor, but is fequently seen as disease contracted by AIDS patients.	MF	27	29
3.	At the present time, receiving blood during surgery increases your risk of contracting the AIDS virus.	T	46	40
4.	If you have the AIDS virus in your body, you need to clean up any blood spills from cuts with a mild bleach solution.	T	49	69

5. Children may contract AIDS from casual contact with other students at school.	T	93	93
6. Because health professionals (doctors, nurses, dentists) etc. are at increased risk of AIDS, your chances of getting the AIDS virus increase whenever you are treated by a health service professional.	RG	73	80
7. Barbers and hairdressers are a group that has an increased risk of contracting AIDS.	RG	93	84
8. AIDS is caused by irritation produced by homosexual activity.	MF	71	62
9. Undertakers are a group that has an increased risk of contracting AIDS.	RG	24	13
10. Sharing a needle, if you are a drug user, increases your chance of transmitting or receiving the AIDS virus.	T	24	13

11. A person must have observable symptoms in order to be able to transmit the AIDS virus.	T	100	96
12. AIDS is caused by a virus that infects white blood cells.	MF	93	96
13. The AIDS virus can be spread by blood transfusions.	T	76	71
14. Eating in a restaurant that has a waiter that has AIDS greatly increases your chance of contracting AIDS.	T	85	87
15. Shared tooth brushes may lead to transmission of the AIDS virus.	T	76	80
16. You can receive the AIDS virus by touching shared equipment such as doorknobs, computer terminals, library books or tables, etc. because someone who had the AIDS virus may have sweat or sneezed on them.	T	49	42

17. Having a fellow student in one of your classes who had AIDS would increase your chance of getting AIDS.	T	90	96
18. Every person infected by the AIDS virus has AIDS.	MF	76	62
19. If a person didn't have symptoms of AIDS a year after I had sex with an infected person, the person wouldn't have to worry about getting AIDS or transmitting the virus.	T	93	93
20. People who handle laundry and dry cleaning are a group that has an increased risk of contracting AIDS.		93	96
21. AIDS can be transmitted heterosexually.	T	93	87
22. In order to prevent yourself from receiving the AIDS virus, you should avoid direct skin contact with the blood of other people.	T	68	67

23. Male or female prostitutes and people who employ their services are at increased risk of contracting AIDS.	RG	95	93
24. Among women, only women who have bisexual sex partners are at risk of contracting AIDS.	RG	83	84
25. You can contract AIDS by donating blood to a blood bank.	T	78	80
26. AIDS can be contracted by sharing unsterilized needles among drug users.	T	88	96
27. Breast cancer in males is likely to indicate that the person has been infected by AIDS virus.	MF	93	98
28. Mothers who have AIDS cannot give AIDS to the child by breast feeding their child.	T	85	78
29. AIDS is caused by a bacterium that infects the immune system.	MF	24	33

30. AIDS may be transmitted from toilet seats in public washrooms.	T	83	89
31. It is impossible to test blood to be sure that it is free of AIDS virus.	MF	83	80
32. Medical doctors, nurses and other health personnel are at increased risk of contracting AIDS.	RG	51	64
33. Homosexuals are a group that has been identified as having an increased risk of contracting AIDS.	RG	95	91
34. If I have unprotected intercourse with someone and then have a negative blood test a week later, I don't have to worry about my possible infection.	T	85	91
35. Only homosexuals or bisexuals can contract AIDS.	MF	95	96

36. Taking a shower in gym class with a student who had AIDS would be unlikely to increase your chance of contracting AIDS.	T	73	71
37. The AIDS virus attacks a type of white blood cell known as T-cell.	MF	54	44
38. Making out and deep or french kissing a number of different people doesn't increase your risk of AIDS.	T	66	67
39. Developing fetuses and infant children of high risk mothers are a group that has been identified as having an increased risk of contracting AIDS.	RG	68	58
40. Hemophiliacs and receivers of blood products are at increased risk of contracting AIDS.	RG	76	80

41. An emergency worker or paramedic whose skin contacts the blood of someone who has the AIDS virus is at increased risk of AIDS.	RG	61	69
42. If you have the AIDS virus in your body, you should be careful not to give blood or donate body organs.	MF	98	93
43. AIDS related complex or ARC is a medical condition in which the person displays some preliminary symptoms of AIDS but doesn't qualify for a complete diagnosis of AIDS.	MF	59	47
44. Having sex with multiple partners does not increase your risk of contracting AIDS.	T	95	89
45. The husband and wife in a couple who have never had sex with anyone else and who are not intraveneous drug users are likely to get AIDS if they engage in oral or anal sex.	T	88	87

46. Dentists are at increased risk of contracting AIDS.	RG	39	47
47. College students don't need to take precautions against AIDS because college students are unlikely to get AIDS.	RG	93	93
48. Touching or shaking hands with a person who has AIDS virus is likely to lead to transmission of the AIDS virus.	T	93	91
49. The disease that most commonly leads a physician to suspect a patient has AIDS is pneumocyctis carinii pneumonia.	MF	51	40
50. If you are sneezed on by someone who is infected with AIDS you have a greatly increased risk of AIDS.	T	80	80
51. Being sneezed on by someone infected with AIDS virus would increase your chances of contracting AIDS.	T	71	80

52. The use of spermicide during intercourse reduced the risk of transmitting the AIDS virus.	T	24	22
53. High fever, chills, sweats, unexplained weight loss and loss of appetite, and fatique may be symptoms of AIDS.	MF	63	82
54. AIDS is caused by a fungal infection of the blood stream.	MF	66	69
55. Giving mouth to mouth resuci- tation is likely to transfer the AIDS virus.	T	32	20
56. In purchasing condoms to reduce the risk of AIDS, one should avoid brands that contain spermicide in their lubrication.	T	83	78

Part II. Activities That May Transmit the AIDS Virus
(Response Scale: 1 safe activity, 2 possibly safe activity, 3. unsafe activity)

1. Wet (or French Kissing)	T	56	56

2.	Mutual "masturbation" (using the hand to stimulate another person.	T	63	40
3.	Fellatio (oral sex performed on the male but stopped before climax).	T	17	38
4.	Vaginal or anal intercourse with a condom.	T	54	49
5.	Rimming (oral-anal contact).	T	37	56
6.	Fisting (manual anal intercourse).	T	29	49
7.	Cunnilingus (oral sex performed on the female)	T	37	42
8.	Vaginal or anal intercourse without a condom.	T	90	87
9.	Dry kissing (mouth closed, no exchange of saliva).	T	85	96
10.	Semem or urine in the mouth.	T	63	67
11.	Thinking or fantasizing about sex.	T	98	96
12.	Frottage (body to body rubbing).	T	88	69

13. Looking at nude people or people having sex either directly or through moving or still pictures.	T	90	96
14. Massage and Hugging	T	90	96

Part III Body Products That May Contain the AIDS Virus

(Response scale: 1 AIDS has been found in this product. 2. AIDS has not been found in this product.)

1. Saliva	29	31
2. cut toenail clippings	90	91
3. bone marrow	63	58
4. hair and hair clippings	85	91
5. urine	24	18
6. fingernail clippings	85	91
7. nasal mucus and sneeze droplets	59	44
8. semen	83	89
9. blood	88	89
10. sweat	63	56
11. tears	61	73
12. breast milk	56	60

13.	vaginal and cervical secretions	76	82
14.	spinal fluid	34	36
15.	lymph nodes	39	51

Table 3

Mean Percent Correct For Males and Females on Each Type Of Knowledge Test Item.

Type of Knowledge Items	Males	Females
Transmission of HIV	72.3	73.7
Risk Groups	72.6	73.1
Medical Facts	66.7	64.8

Table 4

Sexual Responsibility Means As a Function of Sex and Class Year

Males		Sexual	Females		Sexual
Class Year	N	Responsibility	Class Year	N	Responsibility
Sophomore	15	2.826	Sophomores	19	2.564
Juniors	8	3.315	Juniors	16	2.470
Seniors	18	2.903	Seniors	10	2.518
	41			45	

Low scores represent more responsible sexual behavior.

Table 5

Correlations Between AIDS Knowledge and Sexual Responsibility

AIDS Knowledge Score		Sexual Responsibility Score	
		r	p
Part I:	Correctness Score	-.164	.138
Part I:	Rating Score	-.248	.021
Part II:	Number Correct	-.250	.020
Part III:	Number Correct	-.161	.139

Table 6

Regression Coefficients, Is, and Significance Levels For Regression of AIDS Knowledge Test Scores on Sex, Sexual Responsibility, Religious Conviction, and Frequency of Church Attendance

Predictor Variable	Coefficent	I value	p value
Sexual Knowledge Pt. I Rating Score			
Intercept	97.53	7.90	0.00
sex	-2.92	-1.20	0.23
sexual responsibility	-7.08	-2.52	0.01
religious conviction	-0.34	-0.39	0.70
church attendance	-0.45	-0.60	0.54
Sexual Knowledge Pt. II Correctness Score			
Intercept	14.52	4.74	0.00
sex	-0.33	-0.55	0.58
sexual responsibility	-1.60	-2.29	0.02
religious conviction	-0.09	-0.43	0.67
church attendance	-0.04	-0.25	0.80